

Radiometer

METimage is a multi-spectral imaging radiometer with high swath width and image resolution in 20 spectral bands in 3 focal planes

- complex online data processing with proper sampling and high data rate
- synchronous, precise control of more than one mirror for high spatial resolution
- command, control and power supply of all detector assemblies
- read-out of science data from the detectors and digitization of the analogue signals
- data formatting and transmission to METimage Control Electronics
- TM/TC handling for monitoring and command control
- sequencer FPGA in high pin count CCGA package

METimage

Jena-Optronik is developing a new generation of METimage cameras for weather satellites. The development order has been awarded by the German Aerospace Center (DLR). METimage will play a central role in supplying images for weather forecasting and meteorological data.

In the development an innovative approach will be chosen with support from the German Aerospace Center: the telescope rotates as it takes its readings, enabling it to capture an exceptionally large image from horizon to horizon.

Back in 2003 Jena-Optronik developed and patent registered the proposed concept. Over recent years the project has been developed further with the support of the Deutscher Wetterdienst (Germany's National Meteorological Service), the Federal Ministry for Transport, Building and Urban Affairs and the German Aerospace Center.

METimage is to be used on the next generation of low-flying weather satellites, the Post-EUMETSAT Polar System (EPS). It will be far superior to the current system in

terms of resolution and image width as it can photograph a strip nearly 3000 kilometers wide with a resolution of 500 meters and better. The instrument currently in orbit offers a resolution of 1100 meters. The marked improvement in the quality of the images will provide for six-day weather forecasts in advance, significantly longer than at present.

It accomplishes the user requirements for measurements of physical parameters in the atmosphere, of the sea surface and of the land surface to assess meteorologically relevant states.